WHAT IS CLAIMED IS:

1. A method for enriching antigen-specific T lymphocytes comprising the steps:

a) contacting a heterogeneous population of antigen-specific T-lymphocytes with a matrix comprising MHC-antigen complexes wherein said MHC-antigen complexes comprise one or more antigens, for a period of time sufficient to allow the antigen specific T lymphocytes to interact with the matrix;

b) eluting the antigen-specific T lymphocytes from the matrix to provide an enriched population of antigen specific T lymphocytes.

2. A method for isolating antigen-specific T lymphocytes from a heterogeneous population of cells from a patient, comprising the steps:

a) contacting a heterogeneous population of antigen-specific T-lymphocytes from said patient with a matrix comprising MHC-antigen complexes wherein said MHC-antigen complexes comprise one or more antigens, for a period of time sufficient to allow the antigen-specific T lymphocytes to interact with the matrix;

b) expanding in culture the antigen-specific T lymphocytes on the matrix to provide an enriched population of said patient's antigen-specific T lymphocytes.

3). The method of claim 2 wherein the antigen specific T lymphocytes are eluted from the matrix before expanding in culture.

4). The method of claim 2 wherein the antigen-specific T lymphocytes are expanded in culture with one or more immobilized costimulatory molecules selected from the group consisting of anti-CD28 antibody, B7-1, B7-2, integrins, cell adhesion molecules, IL-2 and IL-4.

5). The method of claim 4 wherein the antigen-specific T lymphocytes are eluted from the matrix before expanding in culture.

6). A matrix for capturing antigen specific T lymphocytes, comprising a support having on its surface immobilized Class I peptide, and a predetermined amount of an antigen.

7). The matrix of claim 6 wherein the matrix is a bead.

8). The matrix of claim 6 wherein the antigen is a peptide.

9). A method for enriching antigen-specific T lymphocytes comprising the steps:

a) contacting a heterogeneous population of antigen-specific T-lymphocytes with the matrix of claim 4 for a period of time sufficient to allow the antigen specific T lymphocytes to interact with the matrix;

b) eluting the antigen-specific T lymphocytes from the matrix to provide an enriched population of antigen specific T lymphocytes.

10). The method of claim 9 wherein the matrix is a bead.

11). The method of claim 9 wherein the antigen is a peptide.

12). A method for isolating antigen-specific T lymphocytes from a heterogeneous population of cells from a patient, comprising the steps:

a) contacting a heterogeneous population of antigen-specific T-lymphocytes from said patient with the matrix of claim 4 for a period of time sufficient to allow the antigen-specific T lymphocytes to interact with the matrix;

b) expanding in culture the antigen-specific T lymphocytes on the matrix to provide an enriched population of said patient's antigen-specific T lymphocytes.

13). The method of claim 12 wherein the matrix is a bead.

14). The method of claim 12 wherein the antigen is a peptide.

15). The method of claim 12 wherein the antigen-specific T lymphocytes are eluted from the matrix before expanding in culture.

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16). A matrix for capturing antigens, comprising a support having on its surface immobilized empty Class I peptide, wherein said Class I peptide is capable of binding one or more antigens.

17). The matrix of claim 16 wherein the matrix is a bead.

18). The matrix of claim 16 wherein the antigen is a peptide.

19). A method for enriching antigen-specific T lymphocytes comprising the steps:

a) binding one or more antigens to the matrix of claim 14;

b) contacting a heterogeneous population of antigen-specific T-lymphocytes with the matrix of step a) for a period of time sufficient to allow the antigen-specific T lymphocytes to interact with the matrix;

c) eluting the antigen-specific T lymphocytes from the matrix to provide an enriched population of antigen specific T lymphocytes.

20). The method of claim 19 wherein the matrix is a bead.

21). The method of claim 19 wherein the antigen is a peptide.

22). A method for isolating antigen-specific T lymphocytes from a heterogeneous population of cells from a patient, comprising the steps:

a) binding one or more antigens to the matrix of claim 14;

b) contacting a heterogeneous population of antigen-specific T-lymphocytes from said patient with the matrix of step a) for a period of time sufficient to allow the antigen-specific T lymphocytes to interact with the matrix;

c) expanding in culture the antigen-specific T lymphocytes on the matrix to provide an enriched population of said patient's antigen-specific T lymphocytes.

23). The method of claim 22 wherein the matrix is a bead.

24). The method of claim 22 wherein the antigen is a peptide.

25). The method of claim 22 wherein the antigen-specific T lymphocytes are eluted from the matrix before expanding in culture.

26). The method of claim 22 wherein the antigen-specific T lymphocytes interact with the antigen with low-affinity.